[redacted]

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INVENTION DISCLOSURE

PAGE ONE OF ____

PDNO 10006354 DATE RCVD Aug. 8, 2000 ATTORNEY LRS

*Instructions: The information contained in this document is **COMPANY CONFIDENTIAL** and may not be disclosed to others without prior authorization. Submit this disclosure to the HP Legal Department as soon as possible. No patent protection is possible until a patent application is authorized, prepared, and submitted to the Government.*

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Descriptive Title of Invention: VoIP Packet Consolidation

Name of Project: N/A

Product Name or Number: N/A

[redacted]

Description of Invention: *Please preserve all records of the invention and attach additional pages for the following. Each additional page should be signed and dated by the inventor(s) and witness(es).*

A. Description of the construction and operation of the invention (include appropriate schematic, block, & timing diagrams; drawings; samples; graphs; flowcharts; computer listings; test results; etc.)
B. Advantages of the invention over what has been done before.
C. Problems solved by the invention.
D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).

Signature of Inventor(s): Pursuant to my (our) employment agreement, I (we) submit this disclosure on this date: [8-4-00].

Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
340243	Jeffrey S. Weaver	Jeff S. W—	396-5940	125	DLP
			[redacted]		
Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name
Employee No.	Name	Signature	Telnet	Mailstop	Entity & Lab Name

(If more than four inventors, include additional information on another copy of this form and attach to this document)

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INVENTION DISCLOSURE COMPANY CONFIDENTIAL PAGE ____ OF ____

Signature of Witness(es): *(Please try to obtain the signature of the person(s) to whom invention was first disclosed.)*

The invention was first explained to, and understood by, me (us) on this date: [8-4-00]

Full Name	Signature	Date of Signature
David J. Luman	David J. Luman	8-4-2000

Inventor & Home Address Information: *(If more than four inventors, include addl. information on a copy of this form & attach to this document)*

Inventor's Full Name: JEFFREY S. WEAVER

Street: ON FILE

City | State | Zip

Do you have a Residential P.O. Address? P.O. BOX | City | State | Zip

Greeted as *(nickname, middle name, etc.)* | Citizenship

Inventor's Full Name

Street

City | State | Zip

Do you have a Residential P.O. Address? P.O. BOX | City | State | Zip

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City | State | Zip

Do you have a Residential P.O. Address? P.O. BOX | City | State | Zip

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City | State | Zip

Do you have a Residential P.O. Address? P.O. BOX | City | State | Zip

Greeted as *(nickname, middle name, etc.)* | Citizenship

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Description of Invention: *Please preserve all records of the invention and attach additional pages for the following. Each additional page should be signed and dated by the inventor(s) and witness(es).*

A. Description of the construction and operation of the invention (include appropriate schematic, block, & timing diagrams; drawings; samples; graphs; flowcharts; computer listings; test results; etc.)

NETWORK ROUTERS MAY TRANSMIT DATA FROM COMMON SOURCES AND TO COMMON DESTINATIONS. IN THESE CASES, SHORT VOIP PACKETS MAY BE TAGGED AT GENERATION, THEN CONSOLIDATED AND TRANSMITTED AS ONE LARGER PACKET. THIS IMPROVES NETWORK UTILIZATION BY REDUCING THE NUMBER OF HEADERS NEEDED. IT ALSO ALLOWS THE DATA TO BE SENT SOONER, THUS REDUCING OBJECTIONABLE DELAY IN THE LISTENER'S AUDIO.

B. Advantages of the invention over what has been done before.

CONSOLIDATION / DECOMPOSITION OF PACKETS CAN OCCUR TRANSPARENTLY TO BOTH SENDER AND RECEIVER.

METHOD EFFECTIVELY REDUCES NETWORK TRAFFIC INSTEAD OF INCREASING IT, AS PRIORITIZATION CASES.

C. Problems solved by the invention.

VOICE OVER IP (VoIP) PACKETIZES COMPRESSED DIGITAL SOUND INFORMATION, THEN SENDS IT OVER A NETWORK SYSTEM. THE PACKETS ARE REASSEMBLED AND DECOMPRESSED AT THE RECEIVING END, THEN PLAYED. DUE TO THE EFFICIENT COMPRESSION ALGORITHMS USED, VERY SMALL PACKETS MAY BE GENERATED FREQUENTLY. FOR NETWORK EFFICIENCY REASONS, THESE PACKETS ARE TYPICALLY BUFFERED UNTIL A LARGE ENOUGH PACKET IS ACCUMULATED TO TRANSMIT EFFICIENTLY. THIS BUFFERING CAUSES DELAY WHICH IS FREQUENTLY PERCEPTIBLE TO THE LISTENER AND IS OBJECTIONABLE. THE INVENTION DETAILS A METHOD FOR REDUCING THE DELAY AND FURTHER IMPROVING NETWORK UTILIZATION. ESPECIALLY FOR BROADCAST SCENARIOS. ALSO MAKES ECHO CANCELLATION EASIER.

D. Prior solutions and their disadvantages (if available, attach copies of product literature, technical articles, patents, etc.).

PACKET PRIORITIZATION IS USED TO GIVE VOIP PACKETS ADDITIONAL BANDWIDTH ON NETWORKS. THIS SLOWS OTHER TRAFFIC AND GENERATES MANY EXTRA HEADERS, REDUCING EFFICIENT UTILIZATION.